

Public Helth Dept, Reports Two Humnan Cases of EEE

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Massachusetts Department of Public Health (DPH) Reports Two Fatal Human Cases of Eastern Equine Encephalitis

A 5 year-old girl from Halifax and an 83 year-old man from Kingston have died after being diagnosed with eastern equine encephalitis (EEE), bringing the number of human EEE cases identified in Massachusetts so far this year to three.

The young girl became ill August 26, and died September 4. Testing at the Massachusetts State Laboratory Institute revealed presumptive EEE on September 3, and final confirmatory testing is pending. The elderly man became ill on August 21 and died on August 26. Confirmation of EEE in his case was made a week after his death and was dependent on a blood specimen drawn before his death and testing of tissue samples that were provided after his death.

Last week the first case to be diagnosed in a 63 year-old woman from Duxbury was reported. Although she was the first case diagnosed and reported, her onset was on August 26 after the man from Kingston had already developed symptoms. She continues to be hospitalized in serious condition.

"It's critical that residents protect themselves from mosquito bites," said Dr. Al DeMaria, DPH Director of Communicable Disease Control. *"Mosquitoes will be biting until the first frost."*

The Massachusetts Department of Public Health (DPH) has also confirmed reports of EEE in two horses: one in Haverhill and one in Wrentham. This season both EEE virus and West Nile virus (WNV) have been detected in mosquitoes and birds in a number of communities across the Commonwealth. Thus, on

the basis of testing of mosquitoes, birds and horses, large parts of the state are at risk for EEE and WNV infection. Many mosquito samples from the Kingston, Duxbury and Halifax area of Plymouth County have been positive for EEE virus, with the first evidence of EEE virus in the state in mosquitoes from that area collected in late July. New Hampshire has reported EEE in four people, 14 horses and in numerous birds.

In 2004, four human cases of EEE, resulting in two fatalities were confirmed in Massachusetts residents from Brockton, Foxboro, Holbrook and Middleboro. Among 222 specimens submitted to the State Laboratory this year, a human case of disease with West Nile virus (WNV) has not been identified. There were no confirmed cases of WNV infection in people last year in Massachusetts.

The Plymouth County Mosquito Control Program has been applying intensified control measures in the Kingston, Duxbury and Halifax area for over a month, with interventions against both mosquito larvae in standing water and adult mosquitoes. Enhanced mosquito surveillance has also been in place. DPH is also contacting hospitals in Bristol, Norfolk and Plymouth counties to review reporting and sample submission protocols for suspect cases of encephalitis.

Mosquitoes are still actively biting and will be biting until the first frost. Although their numbers may be down somewhat, they may be more likely to be infected since the amount of virus increases over the warm season. DPH advises the public to take special efforts in protective measures to avoid mosquitoes and mosquito bites into September, one of the highest risk months in Massachusetts for human infections from EEE virus and WNV. There is special concern about exposure to mosquitoes during outdoor recreational activities, related and unrelated to school opening. An advisory will be going out to boards of health, health departments, schools, libraries and other places about the threat from mosquitoes and infections spread by them.

EEE virus infection, though rare, causes severe illness in nearly every case and mortality of 30-50 percent. WNV causes severe illness in less than 1 percent of those persons who are infected and mortality is 20 percent among persons with severe disease. The risk of severe illness from West Nile virus infection increases with age.

The public can take the following prevention steps to reduce the chance of infection.

1. Mosquito-Proof Your Home

Drain Standing Water - Mosquitoes lay their eggs in standing water. Limit the number of places around your home for mosquitoes to breed by either draining or getting rid of items that hold water. Check rain gutters and drains. Empty any unused flowerpots and wading pools, and change water in birdbaths frequently. **Install or Repair Screens**-Some mosquitoes like to come indoors. Keep them outside by having well-fitting screens on both your windows and doors.

2. Avoid Mosquito Bites

Avoid Outdoor Activity During Peak Mosquito Hours. The hours from dusk to dawn are peak mosquito biting times for many mosquitoes. Take extra care to use repellent and protective clothing during evening and early morning - or consider avoiding outdoor activities during these times. **Clothing Can Help Reduce Mosquito Bites.** When possible, wear long-sleeves, long pants and socks when outdoors. Apply Insect Repellent when you go outdoors. A wide variety of insect repellent products is available. The most effective repellents contain DEET (N, N-diethyl-m-toluamide), Picaridin (KBR 3023) or Permethrin. Always follow the instructions on the product label. DEET can be used directly on skin and on clothing. Permethrin can be used on clothing but not directly on skin. Oil of lemon eucalyptus has also demonstrated efficacy against mosquito bites, with protection similar to repellents with low concentrations of DEET. DEET is considered safe when used according to the manufacturer's directions. Products containing DEET should not be used on children less than 2 months of age and should be used in concentrations of 30 percent or lower for older children and adults.

3. Help Your Community

Report Dead Birds to DPH. Dead birds may be a sign that West Nile virus is circulating among birds and the mosquitoes in an area. Call 1-866-MASS WNV to report a dead bird. By reporting dead birds, you can play an important role in monitoring West Nile virus.

Mosquito control in Massachusetts is conducted through nine mosquito control districts, with 183 member communities. You can check with your local board of health or health department to see if there is an organized mosquito control program in your area. DPH staff on the WNV hotline (1-866-627-7968) can also direct any questions you have to the appropriate personnel.

Full information on positive results can be obtained at the website: <http://www.mass.gov/dph/wnv/>

DPH requests the public to continue to report dead birds, which can be an indication of WNV activity, to our toll free hotline 1-866-627-7968.

Surveillance information is available at the MDPH website: <http://www.mass.gov/dph/wnv/>, which lists up-to-date WNV and EEEV test findings.

The State Reclamation and Mosquito Control Board oversee all mosquito control districts. Information for your town can be obtained at: <http://www.mass.gov/agr/mosquito/districts.htm>